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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,758	10/20/2003	Mark Hirst	10014358-1	9600
22879	7590	02/18/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			HOANG, TU BA	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/687,758	Applicant(s) HIRST, MARK	
	Examiner Tu Ba Hoang	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-24 is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 16-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/20/03</u> . | 6) <input type="checkbox"/> Other: ____ |

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, there is insufficient antecedent basis for "the frequency modulation circuit" recited at line 10 in the claim. It is suggested that the term "frequency" to be inserted before "modulation" recited at line 6.

In claim 7, there is insufficient antecedent basis for "the modulation circuit arrangement" recited at lines 1-2 in the claim or from the preceding claim 1. The recitation of "*the voltage signal* output from the average circuit" at line 3 also renders the claim indefinite because there is no antecedent basis for this voltage signal and there is no indication that such voltage signal to be outputted from the average circuit recited in the preceding claim 1 but only the "averaged signal instead. Clarification is needed.

Claims 8 and 9 are indefinite as for the same reason set forth in claim 7 above noting the recitation of "the modulation circuit arrangement".

In claim 13, the term "drive" recited at line 6 should be read as "driver" for being consistent with claim 1 (also note in claim 14, at line 5). There is also no clear antecedent basis for "the inverter" recited at line 7 in the claim since there are two of them.

In claim 14, there is insufficient antecedent basis for "the trigger and reset terminals" recited at line 2 in the claim or from the preceding claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 15 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hirst (US 6,018,151) cited by the Applicant. Hirst shows a circuit for controlling the alternating current power supply to a fusing system comprising a fuser temperature sensor (i.e., from temperature deviation 401, inherency) configured to produce an output signal representative of the temperature of the fuser, a temperature set point circuit (i.e., the desired temperature shown in Figure 3) configured to produce another output signal representative of the temperature to which the fuser is to be heated, a control circuit (Figure 3, i.e., elements 404 and 300 or 100 shown in Figure 1) configured to be responsive to the output signals to monitor the system temperature and to generate at least a control signal indicative that power should be supplied to the fuser of the system, a timing circuit 402 configured to be responsive to the control signal to generate a timing signal (i.e., path timing with switch 402 generating timing signal 1,0,-1) which determines the timing with which power should be applied to the fuser (or also by PWM shown in Figure 1), and an averaging circuit 404,403 (i.e., adding and multiplier shown

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in Figure 3) configured to be responsive to the timing signal and to output a signal which gradually increases and decreases and which is used control delivery of power to the fuser (also see abstract, and column 5, lines 22-30, column 6, lines 4-7 and lines 41-58, and column 7, lines 26-40).

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not show or fairly suggest the use of an averaging circuit between a timing circuit and a modulation circuit for generating a trains of pulses (or the timing circuit which produces a pulse train as recited in claim 21) which varies with the voltage of the averaged signal generated by the averaging circuit to drive the power supply switching circuit from a switch driver circuit in the manner recited in claims 1 and 17 (or the averaging circuit connected with the switch drive circuit via a frequency modulation circuit recited in claim 21) or such combination including the opto isolator recited in claim 16.

Claims 21-24 are allowed.

Claims 1-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


Claims 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Butler (US 5,119,132), Jewell (US 6,229,120), Adams (US 6,317,571), and Chapuis (US 6,833,691).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (571) 272-4780. The examiner can normally be reached on Mon-fri from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu Ba Hoang
Primary Examiner
Art Unit 3742

February 16, 2005